

Remarks/Arguments

Claims 1-15 are pending in this application. Claims 1, 10, and 13 have been amended herein. Claims 1-15 will still be pending upon entry of this response. A request and fee for an RCE are included herewith.

Applicant's attorney would like to point out that the Examiner has kindly provided substantive comments in his most recent advisory action, and that Applicant and said attorney are very appreciative of these comments. Such comments go a long way towards assisting Applicant's attorney in making the present Request for Continued Examination more responsive and directed. Applicant greatly appreciates the extra effort on the Examiner's part in helping to advance the prosecution of the present application in this and other ways.

The Examiner has rejected claim 1, 2, 4-7, 10, 11, 13, and 14 under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent 6,717,547 to Spilker et al. ("Spilker") in combination with U.S. Patent 6,522,297 to Rabinowitz et al. ("Rabinowitz"). The Applicant respectfully disagrees with the Examiner's characterization of this art and the Examiner's application of this art to Applicant's claims. In order to establish the obviousness of a claim, the Examiner must show that all of the claim limitations are taught or suggested by the prior art. M.P.E.P. 2143.03. There are recitations in all of Applicant's independent claims, and thus in all of Applicant's claims through dependency, which are not fairly taught or suggested by Spilker and Rabinowitz.

For example, Applicant's amended claims 1, 10, and 13 all include a recitation of "a filter...shared in common with both" a radio subsystem and either a ranging signal receiving subsystem or the means for receiving a DTV signal. The examiner has previously cited col. 14, lines 34-45 and elements 812A and B from the figures of Spilker, where an ordinary IF filter is shown. The ranging subsystem presented in Spilker that uses the IF filter to which the examiner refers uses GSM signals, not DTV signals. Spilker does not discuss or show any common components at all, much less a common, shared filter as claimed by Applicant connected to two subsystems. In fact, Spilker does not describe any details of the components that might be used for one of the subsystems, namely the DTV subsystem. The detailed block diagram of Fig. 8 on which the Examiner repeatedly relies shows only a system that receives ordinary GSM telephone signals and ranges using only these GSM signals. Spilker may

mention that the mobile terminal can include DTV capability, but this capability is not described or shown in detail anywhere in Spilker, much less in Fig. 8, and there is no discussion of using common components for this capability.

Applicant's claims previously recited the use of a "common" filter. The Examiner has made remarks suggesting that this terminology simply means a commonly occurring or commonly known filter. However, Applicant's specification imparts a definition to the term. In particular, Applicant's use of the term "common" in reference to said filter is intended to invoke a filter that is shared between multiple subsystems within an apparatus or device. To make this point perfectly clear, Applicant has amended all of his independent claims to recite the language "shared in common." This recitation makes explicit in the claims what was previously implicit. Support for this recitation can be found in various places within Applicant's specification, but particularly in the third to last sentence of paragraph [0007]. This recitation renders claims 1, 10, and 13 as well as claims that depend from claims 1, 10, and 13, non-obvious in view of Spilker in combination with Rabinowitz.

In addition to the recitation discussed above, Applicant's independent claims 1, 10, and 13 all recite "correlating the DTV signal with a known sequence that has been predistorted." The Examiner points to specific discussions in Rabinowitz as disclosing this recitation of Applicant's claims, citing: col. 6, lines 43-52; col. 11, lines 10-24 and lines 49-53; col. 11, line 58 - col. 12, line 9; col. 12, line 60 - col. 13, line 3; col. 14, lines 13-34; and Figures 4, 13, and 15 of Rabinowitz. Applicant has examined these sections of Rabinowitz and can find no mention of predistortion or the use of a predistorted sequence as recited in Applicant's claims. Thus, this recitation, which is in all of Applicant's claims either directly, or through dependence, is also missing from, and not suggested by the cited art, alone or in combination. Applicant's claims are patentable over Spilker and Rabinowitz for this additional reason.

The Examiner has stated his opinion that heretofore, Applicant has been arguing against the cited references individually, rather than in combination. The Examiner has further stated that one cannot show non-obviousness by attacking references individually, where the rejection is based on a combination of references. In support of this proposition the Examiner has cited *In Re Keller*, and *In Re Merck & Co*. Even assuming *arguendo* that the

Examiner is correct with these citations, the combination of references cited by the Examiner does not suggest to one of ordinary skill in the art the use of a filter "shared in common," wherein that filter makes use of a "sequence that has been pre-distorted to account for the bandpass of the filter." The test for obviousness must be based on what the combination of references would have suggested to one of ordinary skill in the art. *Keller*, 208 USPQ 871, 882. Another way of stating this test is that it is based on what the art fairly teaches in combination as a whole. *Merck*, 231 USPQ 375, 380.

In the present case, all of the art cited by the examiner shows or suggests devices or apparatus in which telecommunication signaling function and ranging signal reception are carried out by separate subsystems within a device. While it may be obvious to combine some components, it is difficult, at best, to design many of the components so that they will work properly with the two disparate subsystems. In the case of a filter, the very disparate bandwidth requirements of the two types of signals being used in the device as disclosed and claimed by applicant makes filter design difficult. Thus the use of a shared-in-common filter as disclosed and claimed by Applicant is not suggested by the art, even combined. Applicant has arrived at an elegant solution to this problem, namely, the use of a pre-distorted sequence. The Examiner has failed in his burden to show that the art combined, suggests to one of ordinary skill in the art a shared filter which makes use of a pre-distorted sequence to compensate for the fact that such a filter would not be of the proper bandwidth for a DTV signal.

Since the independent claims are patentable over Spilker and Rabinowitz, then the claims that depend from them are patentable for at least those same reasons. However, specifically with respect to claims 4-7, which each recite a shared mixer or a shared mixer in combination with a shared amplifier, Applicant points out that neither Spilker nor Rabinowitz discuss or show any such components that are shared between two receiving subsystems. Thus, the combination of these references cannot show such components. Therefore, claims 4-7 are patentable for at least this additional reason.

The Examiner has rejected claims 3, 8-9, 12, and 15 as obvious under 35 U.S.C. § 103(a) in view of Spilker in combination with Rabinowitz, further in combination with U.S. published patent application 2002/0144294. All of these claims depend from independent

claims already discussed, and are patentable for at least those same reasons. However, claims 8 and 9 each recite a shared mixer or a shared mixer in combination with a shared amplifier. None of these references discuss or show any such components that are shared between two receiving subsystems. Thus, the combination of these references cannot show such components. Therefore, claims 8 and 9 are patentable for at least this additional reason.

Applicant believes he has responded to all of the concerns raised by the Examiner. Reconsideration of this application as amended is hereby requested. If the Examiner has any questions about the present response, a telephone interview is requested.

Respectfully submitted,

Date: 24 July 06

Telephone: (919) 286-8000
Facsimile: (919) 286-8199



Steven B. Phillips
Attorney for Applicant
Registration No. 37,911
Moore & Van Allen PLLC
P.O. Box 13706
Research Triangle Park, NC 27709